

Exhibit F

David Parkinson

From: David Parkinson
Sent: 23 March 2004 14:33
To: Ashley Giles
Subject: Various urgent patent items

Ashley

I am sorry I have been so preoccupied lately with other business issues that has left me a little bit behind in responding to some of your communications. I will attempt to answer most of your queries with this communication, but would appreciate an opportunity to talk over any issues with you before your deadlines. Please note my mobile is switched on and I will be in Edinburgh tomorrow, but will take your call if you deem it necessary.

One general comment I seek your advice on Ashley, is as you may be aware DPS PLC recently changed its name to DPS Limited. I am hoping that if we register this change of name it will not be necessary to do much more with the Patent Office. Can you please advise me on this? I would like this change of ownership name actioned as soon as possible and at the lowest possible cost.

International PCT Application No. PCT/GB 2003/004695 – DPS Feed.solid.s from open vessel

Re your letter of 11.3.04 and reminder of 22.3.04.

I have read the examiners report and looked at the corresponding prior art. I am not sure what benefit additional search fees would gain us at this time, but would be interested to understand your view. It seems to me that the crux of the matter is the non unity objection. Looking at all of the prior art it seems to me to be a collection of either jet pumps or inductors which require a considerable flow of fluids to move the solids out of the open tank into the closed tank. Our main benefit of course is that we can pump liquids from the closed tank to the vortex inducer using a very small flow of fluids. By feeding the pump suction from the closed tank we create a vacuum in the closed tank and it is this vacuum which is directed just above the vortex that creates these solids induction and transportation to the closed tank. The benefit we derive is that we can transport solids at very high concentrations which is not possible when attempting the same with a full flow jet pump or inductor. Our energy requirements therefore are substantially less. We also have considerable control over the velocity and concentrations of the slurry we move, either from the open tank to the closed tank or from the closed tank into the slurry transport line. All of the other prior art in my experience cannot be controlled in the same way as our product.

Ashley we know from our considerable experience with slurry hydrotransportation, particularly with the Tore product that one of the biggest problems with the Hydrotransport product was feeding the transport fluidising unit with as much solids as it was taking away, such that we often had to organise a batch system to continuously fill the discharge vessel. The fact that the AtmoTrans is a breakthrough in this area is adequately demonstrated by the fact that BNFL has been able to convince the Government's Audit Committee to allow them to place a single action contract for DPS's technology to overcome their problem of lifting radioactive solids from an atmospheric tank into a pressure tank and then to further transport that to their cementing process. Something they have been trying to achieve for over 10 years with no success prior to using our product. It may be necessary therefore to look again at the claims in our patent and focus them on the actual heart of the invention which I believe is based upon high concentration slurries evacuated from atmospheric conditions in a very small pipe thus allowing high tonnage rates per hour with minimum liquid flow.

Therefore, I believe claim 1 may need to be adjusted to concentrate on what it is we can do that others can't, i.e. it has been known for some time that if you such a fluid from a container you create a vacuum in that container, nothing new here! If the fluid in question that is removed from the container is water then the water can be used to fluidise solids say in an open tank. Again, nothing new here. By fluidising the fluids in the open tank with say a swirling flow to set up a vortex the energy in the water being pumped can be used to fluidise, deagglomerate settled and compacted solids, again nothing new here, such systems have been used in front of jet pumps for dredging for some time. By placing a duct in communication with the vortex created by the swirling flow of water such that all solids disturbed are lifted by the vacuum in the container through the ducting at an almost complete controllable slurry from ppm to up to 40% concentrations, is new. By determining the height through which we lift the liquid/solids slurry it is possible to even consider pulling the liquid close to its vapour pressure point which in some processes or systems can have considerable

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age, this I believe is new. It is also possible to move very high tonnage rates through very small hoses compared with traditional methods as disclosed in the prior art, a simple example of which is if we dredging sand then please see case 1 and 2 below:

Process Conditions	Case 1	Case 2
Solids density (sand) – kg/m ³	2650	2650
Fluid density – kg/m ³	1000	1000
Pipe solids mass concentration - %	25	50
Solids voidage	0.4	0.4
Slurry relative density	1.184	1.452
Solids spot volume concentration - %	18.6	45.7
Solids volume concentration - %	11.2	27.4
Using a 4" slurry line to transport the solids in case 1 and 2 above under identical velocity of 2.5 m/sec the resultant conditions are met		
Water required to be pumped – m ³ /hr	72.97	72.97
Bulk solids transported – m ³ /hr	13.59	33.32
Dry solids transported – tph	21.6	52.98

Case 1 represents a typical jet pump or inductor application whereas Case 2 is the AtmoTrans under the same conditions and please remember that there is no control over concentration in Case 1 where we have considerable over concentrations in Case 2.

As can be seen from the table above for the same energy requirement i.e. to pump the fluid, Case 1 can transport dry solids at a rate of 21.6 tons per hour, whereas Case 2 (our AtmoTrans) can transport up to and above 52.98 tons per hour. In other words our system can lift from the open pond with the same water feed and the same pipe size 2.45 times more solids per hour than the disclosed prior art. Perhaps we should therefore focus claim 1 on this unique ability of the system which I believe is both novel and utile.

Without the feature I have described above Ashley, the rest of the claims are not necessarily so important as we have them covered in our HydroTrans patent, i.e. solids displaced from a pressure vessel using a fluidising unit. Can I ask you therefore to advise me on best to focus this invention on the benefit it gives above whilst satisfying the examiner and maintaining as many claims as we can.

If you consider that we need to undertake further search reports to achieve this goal then please proceed.

Patent Application UK No. 0404417.8 – DPS Limited – Cyclone Assembly – Your Ref: P101046GB00/RHG

Thank you for the work done on this application and we acknowledge receipt of your invoice.

With regard to Inventorship and transfer of Patent rights we request you to use the following information:

Inventor : David John Parkinson
Bases of company's rights : By virtue of employment by said company

Patent Application UK No. 0309606.2 – DPS Limited – MixTrans – Your Ref: P84977GB00/ASG

With regard to Inventorship and transfer of Patent rights we request you to use the following information:

Inventors : David John Parkinson, James Edward Delves, David Oliver Drew
Bases of company's rights : By virtue of employment by said company

The MixTrans is foremost a device for the 'shearing' of a mud mixture after the mixing or weighting up exercise has taken place. The action of the vortex created by the HydroTrans head within the centre section of the MixTrans creates high shear forces within the new mud mix, resulting in a high shear index for the mud being achieved. Importantly the MixTrans is an in-line device and can therefore be easily retrofitted within a mud mixing system where poor mixing and low mud shear indexes are being achieved. The industry currently suffers from poorly mixed muds and the presence of 'fish-eyes' (small balls of dry powder captured within a clay mixture of mud, which also contain air and adversely affect the weighting up exercise).

If unavoidable we would like to see the claims of this patent at least focussed on this area of being an aggressive shear mixer downstream of existing mixing equipment, many of which are described in the prior

We would like to have the opportunity to induct heavier mud around the inlet annulus which would then be thoroughly shear mixed by the lighter mud which reports to the inlet. Whether it is necessary to concern ourselves with controlling the weight of mud at this point automatically as the examiner has pointed out is claimed in 5213414 Baker Hughes et al, column 4 line 50, we are not sure at this time that this is relevant as most mixing systems are controlled by densitometers of one type or another.

Ashley, we would really like to point out to the examiner that the prior art is really not doing what we are claiming with MixTrans, for example my reading of 498819 Conoco is that this really is first stage mixing as opposed to shear mixing and in any case it is a Conoco cyclone. 4213414 Baker Hughes et al is again first stage mixing using a rotating auger and mud feeding the inlet to a triplex reciprocating pump. Although it is mixing drilling mud it is starting off with a dry powder and fluids, whereas we are more interested in the mixing of two fluids having different densities breaking up mud balls and fish eyes to give a good homogenous consistency. 333987 Philip Davies et al is certainly mixing drilling muds but again he is doing it from a dry powder into a tank fed by an auger or Archimedean screw then a rotating mixer to create an initial mix as opposed to our MixTrans which is a static device. 4345841 Geosource Rogers et al, again this one teaches us the mixture of dry solids from a hopper into a swirling mixing flow whereas our interest remains with the shear mixing of already mixed light and heavy muds. Lastly EP1046420 (the German patent) I am not sure I understand this one other than it looks more like a boiler or fuel injector.

If we need to further differentiate our MixTrans from the prior art we would like to consider for example, a 1" small HydroTrans sitting actually inside a 2" larger HydroTrans with the light mud reporting to the small HydroTrans and the heavy mud reporting to the larger 2" HydroTrans (actually upwards through the annulus created by the 1" HydroTrans inside the 2" HydroTrans, thereby maximising the shear mixing at their exit points, prior to release into the mixing chamber. We would also like to consider having the opportunity to have the lighter mud for example reporting to the 1" HydroTrans at a higher pressure than the heavier mud reporting to the 2" HydroTrans which in itself could create some induction and more efficient mixing.

Another further benefit of the design we have been considering for MixTrans would be the ability to utilise standard drill pipe fixtures and fittings and to trap the new units in between standard API 5A type flanges. The major benefit of this would be that our shear mixing devices could be cast at reasonably low cost and would not be pressure retaining items whereas the current methodology requires either jet pumps or inductors to be manufactured out of forged or thick material to create tangential flows. As you will appreciate when you take a tangential inlet into a pipe or mixing body which is designed to hold pressures up to 10,000 psig the wall thickness is considerable and to achieve an ASME 9 full penetration weld is prohibitively expensive, hence the need to use bespoke forgings or manufacture from a solid block.

We think therefore our shear mixer is lighter, smaller and cheaper. We would appreciate it if you would please answer the examiners opposition such that we can move forward on this patent.

In the event that we can successfully take this patent forward we would like to see it established in Europe and PCT countries.

Ashley, I am off to India this Friday and not back until 2nd April, if you need any further information please do not hesitate to contact me, my mobile phone will be working, but I cannot guarantee that I am collecting e-mails. I hope the above is enough to protect our IP to the next stage and I look forward to receiving your responses. I would also be interested in knowing exactly where we stand with the DynaSep media filter patent and to which end I think on my return from India we should have our long muted meeting in Portishead to review all aspects of our patent portfolio.

Regards

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